Gibney (V. P.)

PERIARTHRITIS:

A

STUDY OF FORTY-SEVEN CASES.

BY

V. P. GIBNEY, A. M., M. D.,

OF THE HOSPITAL FOR THE RUPTURED AND CRIPPLED.

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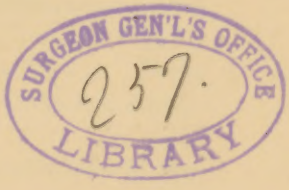

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PERIARTHRITIS—A STUDY OF FORTY-SEVEN CASES.

The large clinical field in which it has been my good fortune to labor for many years has enabled me to study with some degree of care very many cases of disease about joints, and the interest that such study has awakened in my mind has impelled me to trace out a large number of the same with a view to learning what proportion ever affect permanently the functions of a joint. I have often wondered how it was possible to have such extensive suppuration about a joint, such atrophy of a limb, such deformity, and yet have results so perfect. Of late years, the prefix *peri* has come to be of great service in medical nomenclature, and it really expresses a great deal from a pathological point of view. The loose cellular tissue is more or less abundant about all the organs, and when this becomes the seat of an inflammation, usually primary, we speak of it pathologically by using the prefix *peri*, the name of the organ it surrounds, and the suffix *itis*. Thus, we have a perihepatitis, a perinephritis, a perisplenitis, a perimetritis, etc.

This same tissue that surrounds the articulations is frequently the seat of a primary inflammatory process, and for this we use the term *periarthritis*. Several years ago my attention was especially directed to the use of this term by a summary, in the "Half-Yearly Abstract," of a paper by Simon Duplay, published in the "Gazette Médicale de Paris," No. 37, 1872. This author's observations were limited to scapulo-humeral periarthritis. Occasional articles have appeared since the publication of Duplay's. The inaugural the-

sis of Fatome, No. 16, 1878, was on periarthritis of the knee, and an abstract of this was published in the "London Medical Record" for February, 1879.

My object in the present essay is to bring this term into more general use; to record the fact that the disease is of frequent occurrence; to give a clinical picture of the affection as it occurs about the different joints; to enable one to differentiate this from joint-disease, primary or secondary; and to show what perfect results may be expected if reasonable care be employed in its management.

In articular rheumatism, the seat of the disease is in the fibrous tissues, the joint, the aponeurosis, the sheaths of the tendons, the neurilemma, the periosteum, or the muscles and tendons; and hence we can not with propriety speak of rheumatism as being a periarthritis. There may be a myositis in the neighborhood of a joint; yet a pure myositis is a rare affection, and an entire muscle would most likely be involved. We have now a case of myositis ossificans under observation, and the function of the right shoulder is seriously impaired; yet the limitation of the process to certain muscles makes the term periarthritis an objectionable one. This case I have already presented to the Pathological Society, and a report can be found in the "Medical Record," October 30, 1875, p. 747. A bursa may become inflamed, and, by its expansion under a muscle, may give rise to an appearance of infiltration that would mislead one; yet, if the cellular tissue should participate in the inflammation, we should have a periarthritis. Bursæ do not, as a rule, behave in this manner, and we do not speak of a bursitis as a periarthritis. A periostitis near a joint becomes, sooner or later, a periarthritis, but does so by virtue of its extension, and it is the surrounding cellulitis to which we give the name. My paper does not deal with the advanced stages of articular osteitis, for in nearly all cases of this nature we have coincidently an arthritis.

In the foregoing remarks I have, I trust, fully defined the term employed at the heading of this article, and I have also dwelt sufficiently long on the pathological anatomy. The diagnosis, the prognosis, and the treatment I shall speak of more at length when I shall have detailed the histories of a few cases by way of illustration.

PERIARTHRITIS OF THE ANKLE.

Case II.*—*Acute periostitis of distal end of tibia, with superficial necrosis; exfoliation of bone; complete recovery in three months; condition of limb six years later.*—A fairly nourished Irish lad, æt. eleven years, was admitted to hospital September 2, 1873, with a history of lameness of the right ankle of five weeks' standing. Without any known cause, his ankle became the seat of pain, the soft parts began to swell, and he had to resort to a crutch. The symptoms came on quite rapidly, and at the date of his admission there were already signs of constitutional disturbance, much infiltration about the foot and ankle, with deep redness of the skin, great tenderness, movements at the joint almost abolished, and over the internal malleolus two small ulcers through which sinuses communicated with bone. Joint disease was excluded, and the case was treated by rest, tonics, and lotions. *October 3d.*—There remained very little swelling around the joint. From the ulcer (formerly two) a piece of bone nearly as large as a pigeon's egg was removed with the forceps. This came from the internal malleolus. The recovery proceeded rapidly from this date, and by November 1st the ulcer had healed, the sinus had closed, the foot had been restored to its normal contour, its function had been reëstablished, the boy had grown stout, and a cure had been pronounced. Soon afterward he was discharged. *January 21, 1880.*—Examined carefully to-day, and found perfect in limb. Has never had any relapse.

Case XVI.—*Simple periarthritic cellulitis; suppuration; perfect recovery within two months; examined four years later.*—January 27, 1876, there was brought to the Out-door Department a rachitic boy, æt. three and one half years, suffering from a disease about the left ankle of only a few days' standing. There were extra heat, redness of the skin, and considerable infiltration around the external malleolus; the parts were tender, yet, on careful examination, the joint appeared to be intact. There was no history of any fall, though the parents supposed that such had been the case. A diagnosis of periarthritis was made, and a simple evaporating lotion ordered. The patient made two or three visits, no notes of which were made, and I succeeded in finding him January 4, 1880, nearly four years later. He was free from any lameness or deformity, had no atrophy of calf or foot, there was no bony enlargement, no imperfection whatever in the movements either at the tibio-tarsal or at the medio-tarsal joint. All that remained by which a former disease could be recognized was a cicatrix just below the external malleolus. The father stated that an abscess formed very soon after his first visit to the hospital, opened, and was healed within six weeks, when the cure seemed perfect. Has never had any relapse.

Case XIX.—*Periarthritic cellulitis; recovery by resolution within a fortnight; examined three years later.*—A well-developed male child, æt.

* These numbers correspond with those of my unpublished table.

nineteen months, was brought to the Out-door Department October 5, 1876, with a round, boggy swelling over the left external malleolus, of four days' standing. No cause was assigned. The parts appeared as one sees them when caries of the ankle is present, but the history of the acuteness was so clear that a diagnosis was easily made, and cotton-wool with a roller was ordered—the foot, of course, to be kept at rest. I did not see the case again, but succeeded in finding the child on January 4, 1880. It was the picture of health, and I could find no sign of present or past disease about the ankle. The mother informed me that the swelling had all subsided by the end of the week following her visit to the hospital, and the child walked as well as ever.

Case XXVI.—*Acute periostitis of lower end of fibula, left side; necrosis and exfoliation of bone; recovery in three months; followed by chronic periarthritic cellulitis, right side; suppuration and recovery after fifteen months.*—Charles S., æt. twelve, in fair health, sought relief at the Out-door Department from a pain and swelling around the left ankle January 28, 1877. It had come on rather acutely, without apparent provocation. The ankle-joint was not involved, and the case was altogether very simple. Cold-water dressing, with avoidance of exertion, constituted the chief points in the treatment. The skin soon broke, and, on July 17th, a piece of bone of about the size of a pea was exfoliated. The parts speedily healed, and by August 6th the patient was discharged cured. *November 24th.*—Returns with swelling and pain around the *right* ankle, the internal malleolus especially. There is decided tenderness, with limitation in normal movement. Measurement over malleoli 8½ inches, over heel and instep 10⅝ inches; against 7¾ and 9¾ for the left side. The boy reported that he first felt a little pain in this foot the latter part of August, but that it passed off in a day or so, not to return until November 5th, since which date the symptoms had become more marked. This swelling and tenderness, it seems, passed off after a few days' rest, and the boy did not appear at the office again until September 4, 1878, nearly one year later, when there were some signs of periostitis of the lower third of the tibia on the *right* side, the joint this time being free. This swelling here he reported as of six months' standing, and as having resulted from a fall, though we suspected it a part of the same disease he had one year ago. Iodide of potassium was ordered, and on October 2d there was an abscess just above the malleolus, nearly ready to open. He was ordered to return in a few days for an incision, but did not return until November 6th, when it had already opened. The skin had sloughed, and an ulcer was present, not communicating apparently with bone. Under simple dressings it was nearly healed by the 20th, and on January 8, 1879, he was discharged again, cured. He reported occasionally by request, and, while a little pain was felt at times during the spring and early summer, he had no relapse. He was finally examined January 4, 1880, and found to be free from any disease, deformity, or impairment of function at either ankle. His mother reported that no bone had ever come out of the ulcer on the right leg.

PERIARTHRITIS OF THE KNEE.

CASE VI.—*Thrombosis of the saphenous; secondary periarthritis; recovery by resolution in eight months; examined finally ten months later.*—A male, aged ten, was admitted to hospital June 12, 1878. A brother of this patient had acute synovitis of the hip, and his case has already been reported.* The boy whose case we now record is reported to have been subject to pulmonary diseases, indefinitely described. Still, he was generally in good health. Four weeks prior to his admission he was operated on for ingrowing nail (nature of the operation not learned), and two weeks later he was taken with pain, coming on suddenly one night, on the inner and anterior aspect of the left thigh. He was feverish and restless that night. Within a day or two the knee swelled, a few days later the thigh, and ten days from the beginning the foot and leg. From being stout and robust-looking, he had fallen away to a lean and haggard-looking boy by the time he first came under our observation. His face bore the marks of much suffering, and he had to be carried into the office with great care. His pulse was 130, respiration 36, temperature 103·5° F. (morning). He could not be induced to bear any weight on the limb, and, when asked to indicate the seat of pain, pointed to the lower third of the thigh, inner aspect. Here the mother, too, pointed as the seat of the initial pain, tenderness, and swelling. There can be felt at this point now an induration, subcutaneous, oblong, and lying in the course of the femoral vessels; the tenderness here is greatest, and extends downward to the internal lateral ligament, around the joint, taking in the ligamentum patellæ and the external lateral ligament, and upward along the vessels into Scarpa's space and the inguinal region. After a pretty thorough examination, there is no other point or region of tenderness to be found. The limb is swollen from the groin to the great toe; the heat is greatest about the knee, while the foot is comparatively cold. The thigh, at its upper, middle, and lower thirds, measured 2½ inches larger than its fellow; the knee, 2 inches larger; and the calf, 1 inch. The foot is proportionately large. Physical examination of the thorax reveals an apparent bulging in the left infraclavicular space, coarse and fine mucous râles in the same region, an absence of dullness, and no signs of endo- or peri-carditis. He has a loose cough, and is reported to have expectorated, though no sputa can be obtained to-day for examination. The limb is kept at rest in the extended position, evaporating lotions used, and the tincture of the chloride of iron administered internally. *January 13th.*—The auscultatory signs of yesterday have disappeared, and no further attention is given to the thoracic viscera. His pulse this evening is 120, and his temperature 100·5°. *January 28th.*—There have been no signs of suppuration since admission, and there is only three quarters of an inch difference now between the thighs and between the knees. All swelling below the knee has disappeared. With unimportant changes, the case

* GIBNEY, "Diagnosis of Hip Disease," "Am. Jour. Med. Sci.," October, 1878.

progressed to a perfect recovery, the resistance to motion finally yielding entirely. He was under observation until the 6th of April, 1879, and was seen again for ultimate result on December 20th, when the functions of the joint were found perfectly reëstablished, the limbs equal in size, and the boy free from any lameness or deformity.

Case XV.—*Periarthritis following vaccinia; complete recovery in one month; final examination three and a half years later.*—A delicate male child, aged two and a half years, came under treatment in the Out-door Department May 16, 1867. Two weeks before this date it was vaccinated, and one week later the right knee began to swell, and the ham-strings to contract. On May 15th the mother reported the child was taken to one of the colleges, where the case was examined very thorougly for hip-disease, and on the same night she observed a circumscribed swelling of the calf. This was quite apparent this morning, on examination at the hospital, and in addition to the periarthritis of the knee, the signs of which seemed clear enough, there seemed to be a separate cellulitis of the calf. It was treated accordingly, and on the 24th, eight days later, an abscess was very apparent. This was incised, and three ounces of thick pus evacuated. The infiltration about the knee was much less marked, and the contractions were decidedly less. This speedily disappeared, and by the 30th the functions of the joint were perfect, and only the incision-wound remained. The case was regarded as about cured, and the mother was directed to bring the child back in two weeks. This she did not do, and I succeeded in finding him December 28, 1879, and, after a pretty careful examination, could elicit no signs of any disease or deformity. The only sign of former disease was a cicatrix.

Case XX.—*Perinephritis with complete recovery; periarthritis of knee of same side three months later; recovery with perfect use of limb.*—In the "American Journal of Obstetrics and Diseases of Women and Children," in an article on "Perinephritis in Children," I reported a case, in which a cellulitis has since developed about the left knee. The child was a boy, aged two and a half years, and came under treatment for the second time March 20, 1876. On this occasion there was a swelling, with heat and pain, about the left knee, of six days' standing, coming on without apparent provocation. The movements at the joint were good and comparatively painless; there was 1½ inch increase in size, while the surface thermometer, applied over the internal condyle, registered 4° higher than at the same point on the opposite limb. Compression by means of cotton-wool and a knee-lacing was employed, and by the middle of the month following all swelling had subsided, and the case was regarded as cured I saw the father on December 31, 1879, and learned that the boy had had no relapse, and that there was no lameness. The child, however, suffers much from a chronic impetiginous eczema of the scalp, and is under special treatment for this affection.

Case XLVI.—*Periarthritis undergoing speedy resolution.*—John W., æt. seven years, was admitted to hospital January 22, 1880. The family history was good on both sides, and the boy had been perfectly well

and free from lameness up to January 16th, on which date he fell to the floor, striking the left knee. Next day he walked lame, and has walked very little since. He did not complain of any pain, rested well nights, and only yesterday was there any swelling about the knee, though for three or four days he has held the limb extended, and has resisted any efforts at passive motion. His rectal temperature this morning is 102°, and his pulse is 128. Is thin, but fairly nourished, stands squarely on both feet, and walks with very little difficulty, scarcely limping at all; there is considerable infiltration anteriorly at the lower third of the thigh, extending down even to the spine of the tibia; there is extra heat of the skin, with very little tenderness on handling the parts—in fact, there is no tenderness over the lateral ligaments, and none anywhere except below the patella; no pain on crowding the articular surfaces together; none on lateral movements. Extension can be made to 175° (about perfect); flexion beyond 160° is resisted by muscular action, and causes pain. The patella is movable over the normal area, and, on being percussed, does not "click" against the articular surface beneath, as it does when there is effusion within the joint. The measurements are as follows:

	Right.	Left.
Middle of the thigh	10½ in.	10½ in.
Just above the knee	8¼ "	9½ "
Over the knee	8½ "	9¾ "
Just below the knee	7 "	8 "
Calf	7½ "	7¾ "

A straight splint was applied, and cold-water dressings were employed. The signs within a week had nearly entirely disappeared, and there was less than one half an inch difference in the measurements. February 11th, they were equal, and a cure was complete. *February 20th.*—No sign of disease has recurred, and the boy is discharged.

PERIARTHRITIS OF THE HIP.

Case I.—*Phlegmonous periarthritis; complete recovery; result verified at end of seven years.*—A hearty-looking girl, aged seven years, was admitted to hospital August 10, 1872. The family history was free from taint, and the child herself had been sound and healthy until ten days preceding the date above recorded. A slight halt was first observed, and the cause was traced to a fall from the stoop. The mother next day examined the hip, and found swelling and heat over the gluteal region. She painted the part with iodine, and, finding the lameness to continue, brought her to the hospital, as already stated. The patient, on admission, stood with the right limb advanced and the foot a little everted, resting, however, squarely on the floor; walked quite lame, like one with hip-disease in the early stage. There was considerable infiltration throughout the gluteal region, giving quite a breadth to the nates on this side. The tro-

chanter seemed to be enlarged, and pressure over this, as well as in the groin, caused much pain, referred to the hip. Flexion of the thigh was painful, and was resisted by muscular action. There was no shortening or atrophy of the limb. The pulse was 96, respiration 24, temperature 99·5°. A blister over the hip was ordered, and the blistered surface was dressed for two or three days thereafter with poultices. The termination of the infiltration will best be seen by the following notes: *August 21st.*—Just below the crest of the ilium a large furuncle is opened, and a pretty free exit is given to a quantity of thick pus, mixed with blood. *September 20th.*—The opening has closed. *October 24th.*—Improvement in every respect marked. The signs observed on admission have nearly all disappeared, although the case is to be continued under observation for a while longer. She was examined April 22, 1873, and no sign of disease could be found. The functions of the joint were perfect, and there was no muscular atrophy. I saw the child again in June, and no relapse had occurred; and in January, 1880, I saw the mother, who told me that the girl was at boarding-school, and never had had the slightest sign of recurrence of disease about that joint.

Case III.—*Suppuration of inguinal ganglia; deformity at hip consequent thereon; recovery.*—This case has been reported, in a paper to which reference has already been made, in the "American Journal of the Medical Sciences" for October, 1878. It is Case No. XV. of that series, and is on page 402.

Case IX.—*Extensive suppuration; complete recovery, with functions of muscles restored; final examination two years later.*—James C., aged nine years, was admitted to the hospital September 5, 1877, with a history of lameness dating from the 19th of August, from having fallen through a cellar doorway the day before. He had been resting poorly for the past two nights. On admission, his tongue is coated, his pulse is 120, temperature 101·5°, and he is fairly nourished. He stands with his right thigh advanced, knee semiflexed, and foot slightly everted; he walks decidedly lame, favoring the right side. The nates on this side is enlarged, and presents to the touch an elastic feel just about the trochanter, where there is also considerable tenderness. The surface temperature is 2° lower over this region of fullness than at the corresponding point over the right hip. There is 1 inch increase in circumference; tenderness in the groin, but none in the hip, as tested by pressure over the trochanter in the line of the neck of the thigh-bone, and by pressing on the knee (flexed) and on the foot (leg extended) in the axis of the limb. The movements are limited in all directions—in flexion to 90°, and in extension to 150°. There is no spinal tenderness, no ilio-costal fullness, no tenderness or induration in the iliac fossa. On the following evening a fly-blister was applied, and the usual after-treatment with poultices was adhered to; yet, on September 15th, the infiltration had increased to such an extent that the boy could scarcely be moved, so extremely tender were the parts about the hip; the circumference had increased three inches. From this time forth it became evident that suppuration would supervene, and the parts soon be-

came greatly distended, the thigh assumed a degree of flexion amounting to about 90°, and on October 1st there was seven inches difference between the two thighs at the upper third. The boy had become greatly reduced. Abscess opened by incision, and two pints of pus evacuated. Tonics and stimulants are administered quite freely. The case, without further detail, progressed to a cure by November 10th, the opening of the abscess having closed by October 17th. The boy was discharged December 7th completely restored; no lameness, no deformity, in good health. On January 5, 1880, I sought him out, and made an examination of the limb, finding a joint absolutely perfect, so far as signs go. There was no atrophy of the limb, no loss of muscular power. The only sign of former disease was a cicatrix on the posterior surface of the thigh in the upper third.

Case XLIII.—*Periostitis with superficial necrosis of upper third of femur; many signs of joint-disease; complete recovery after exfoliation of bone; acute periostitis of tibia, upper third, one year later; ultimate recovery.*—On the 23d of October, 1877, there hobbled into the Out-door Department, on crutches, a man aged twenty-two, of fair build, yet not well nourished; and his sufferings were so great, he said, that he had lost much flesh during the past fortnight. His lameness was of only four weeks' standing, and, in fact, none of his symptoms dated further back. He was a porter in a mercantile house, and fancied that he had strained himself while lifting. It seemed a plausible etiology, too, for his pain and soreness about the right hip began the day after a severe effort at lifting a case of goods. Swelling soon followed, and prior to the date of his visit to the hospital a blister had been applied. It was difficult to secure an examination at all satisfactory; yet there was found a marked degree of infiltration diffusely scattered throughout the gluteal and upper femoral regions, with tenderness on handling and on attempted movements at the hip. A diagnosis was provisionally made of hip-disease in its acute stage, and further vesication was ordered. *October 27th.*—Is able to walk now, and feels very much better. *November 5th.*—Walks with a very slight limp, has no pain, the infiltration is much less, and the patient wants to return to work. After a week or two he ceased coming, and returned to his vocation, although the movements at the joint were not quite restored. He was able, however, to do only very light work, and then suffered much pain after exertion. *March 29, 1878.*—Returns with a relapse—i. e., swelling, pain, and tenderness about the trochanter major, of two weeks' standing. The infiltration this time is phlegmonous in appearance, and the movements of the joint are very little, if at all, impaired. He was blistered again, and iodide of potassium was administered. This treatment was continued with temporary benefit, then acute symptoms recurred, and finally, on May 4th, an abscess on the upper third of the thigh, outer aspect, was opened. *May 21st.*—A small spicula of bone from the shaft of the femur exfoliated through the abscess opening. After this the discharge ceased, and the opening soon closed. *June 5th.*—Discharged cured; no lameness, no pain, no infiltration. Nothing further occurred until January 22, 1879, when he returned with a swelling and tenderness

over the spine of the tibia on the same side, of ten days' standing. The circumference is one inch greater than that of the fellow limb at the corresponding point. Periostitis of the tibia is diagnosticated, and iodide of potassium, gr. x, t. i. d., ordered. *February 13th.*—Incision made to the bone, and more blood than pus evacuated. After a few days there was an increased flow of pus, and a few days later the wound closed. *February 21st.*—Discharged cured. *December 13, 1879.*—Seen to-day as a conductor on the Fourth Avenue Railroad, and declares that he has not suffered the slightest inconvenience since last spring. Considers himself perfectly restored.

PERIARTHRITIS AT THE SACRO-ILIAC JUNCTION.

Case IV.—*Gluteal abscess; death from exhaustion; autopsy.*—This case has been reported, in the paper to which reference has once or twice been made, in the "American Journal of the Medical Sciences" for October, 1878, p. 401. The child was three years of age, a female, and began to walk lame in December, 1874, when two years of age; was treated the first year for caries of the vertebræ, with a plaster-of-Paris jacket; came under our treatment December 14, 1875, when vertebral disease was excluded, and hip-disease suspected. The signs were so much against this disease at the hip, though, that this diagnosis was finally given up, and sacro-iliac disease made out. The abscess grew to enormous size, was opened, and the discharge continued until August 22, 1876, when diarrhœa set in, and the child died. I quote from my report in the "American Journal of the Medical Sciences": "An examination, post mortem, revealed the sac of an abscess about eight inches long by four wide, lying between the glutei muscles, and a careful search failed most signally to detect any connection with diseased bone. The hip-joint, the sacro-iliac joint, and the dorso-lumbar vertebræ were carefully examined, and found to be absolutely free from disease."

Case XII.—*Suppurative cellulitis, of seven months' standing, from a neglected tent; complete recovery; final examination four years later.*—On the 9th of March, 1875, a female child, aged one and a half year, was brought into the office of the Out-patient Department, and the examination, which was very superficial, resulted in a diagnosis of caries at the sacro-iliac junction. The child was feeble, and was with difficulty handled, on account of tenderness; the soft parts about the sacrum were extensively infiltrated, two or three ill-conditioned ulcers were present, and the skin around these was bluish, the veins were prominent, and there was a sero-purulent discharge which was rather abundant. I did not explore the ulcers and sinuses with a probe, nor did I go through with any of the recognized tests for the presence of disease at the sacro-iliac synchondrosis. I learned from the mother that this condition of the soft parts had existed for six weeks, and that the first sign she observed was a small point of redness and swelling, like an ordinary boil. She knew of no cause. I did not ask her anything about previous treatment; was hurried, and, as before stated, did not examine very closely into the case. It

seemed clear to my mind at that time, for I thought sacro-iliac disease of common occurrence. I had not seen any cases about which I had felt sure as to diagnosis, yet I attributed this to my ill luck. Simple dressings, with tonics and occasionally stimulants, made up the treatment for the next six months. I did not see the case often, yet there seemed to be no marked change in the signs presenting from time to time, and while the health was improving a little I felt little uneasiness about the ultimate result. In September she suffered considerable pain, and there were four sinuses, with large openings, amounting to ulcers. *September 18th.*—The mother calls to-day with the child, and brings in her hand a piece of muslin, one inch square, which she found yesterday protruding from one of the ulcers. The muslin was far on the way to decay, and, on questioning the mother, she remembered well that, in the early part of February, seven months ago, the doctor who opened the "boil" inserted a piece of muslin to keep the wound open. She did not see the doctor any more, and had forgotten all about the tent. *September 22d.*—All the sinuses have closed, and the child is about well. I did not see the case any more, but found the child on January 4, 1880, and made a careful examination. I did not find any impairment of the functions at either hip or sacro-iliac joint. There was no atrophy, save about the cicatrices which marked the sacral region. The mother reported that no relapse had ever occurred.

Case XXXIX.—*Cold abscess over sacrum—coming on during convalescence from scarlatina; recovery at end of eight months.*—Horatio R., aged three years, came under treatment in the Out-door Department May 5, 1879. There was a soft, fluctuating tumor over the left sacro-iliac junction, which had first made its appearance in the latter part of January, as the child was convalescing from scarlatina. The spine and hip seemed free from encroachment. *May 14th.*—The skin is a little red over the tumor, and the child walks quite lame. Hot fomentations ordered; cod-liver oil and iron for medication. *19th.*—The mother called to report that the abscess had opened spontaneously, and was discharging freely. *24th.*—There is an ulcer over the left sacro-iliac junction, $\frac{3}{4} \times \frac{1}{2}$ inch in size, and a quarter of an inch in depth, filled with healthy granulations. There has been a little febrile reaction. A slight discharge continued until September, the ulcer diminishing to a small fistulous opening, and then the parts healed. The child walked lame during the summer, but all lameness disappeared when the sinus closed. *January 6, 1880.*—There is no infiltration about the nates on either side, no atrophy of either limb, the functions of the joint are perfect, and the child walks with perfect ease. No bony enlargement can be felt; no spiculæ of bone were ever exfoliated. The case is cured and discharged.

PERIARTHRITIS OF THE VERTEBRAL ARTICULATIONS.

One can scarcely speak of a spinal periarthritis. Yet, as spinal caries is usually described among joint diseases, and as

the pathology of bone diseases about the spinal articulations is essentially the same as that of bone disease about other articulations, I have thought it expedient for the sake of analogy to report two cases of abscess over the spinal column, the more especially as one was a cold abscess, and caused an error in diagnosis. The other was acute, and the only points of interest are associated with its inception.

Case XXV.—*Cold abscess over first and second lumbar vertebræ; diagnosis of caries made, and a brace applied.*—A male, aged thirteen, came under my observation in the Out-door Department of the hospital, August 2, 1877. He was at that time wearing a spinal brace, which had been applied in June for supposed caries of the lumbar vertebræ. The diagnosis had been made by one who had seen many cases of spinal disease. The boy was in fair health, and did not know of any cause for the trouble from which he sought relief. There was a little fullness over the spinous processes of the first and second lumbar vertebræ in June, so I was informed; there was stiffness without a history of fall or strain. On the 2d of August, however, the fullness was circumscribed in a measure, and there was possibly a little fluctuation. I could detect no evidence of bone disease on a careful examination, and made a diagnosis of cold abscess, possibly connected with the periosteum. The brace was removed, and it was decided to keep the case under observation. *October 2d.*—Spontaneous opening this morning, with discharge of a cheesy purulent matter. With a probe no eroded bone could be discovered. Poultice ordered, and on October 16th the sac had refilled, though now the abscess walls were collapsed. Has been taking iron in some form from the beginning. *23d.*—About relieved; the discharge is insignificant, and the diagnosis is fully confirmed. I did not see the boy again until December 29, 1879. I then found him and made a thorough examination. Only the cicatrix remained. No other sign of former disease; none of present disease. Has not had any relapse.

Case XLIV.—*Acute dorsal cellulitis; cure at end of two months.*—A female child, aged two and a half years, was brought to the Out door Department, November 21, 1879, with a temperature of 103·25°, very tender on being handled, and with a fullness without fluctuation over the dorsal spine, the skin over which was a little red and painful to the touch. The child walked stiffly, favoring the right side. Concussion elicited no tenderness, nor did lateral motion; no angular prominence of the spine could be detected. The child was perfectly well six days before. At that time the mother observed a little swelling and tenderness about the *face*, and the child began to walk awkwardly; four days later—yesterday—the *back* first began to swell. An evaporating lotion was prescribed, and the muriated tincture of iron, in glycerine, was ordered for internal use. *November 26th.*—Abscess forming. *29th.*—Incision this morning, and about three ounces of pus evacuated. The case did well after this, and on De-

cember 3d the sac was empty, and the wound had healed; no deformity, no lameness. *January 6, 1880.*—Sac refilling. *21st.*—After last date the wound reopened spontaneously; a little discharge followed, the parts healed, and to-day the patient is reported cured. Has been seen once in February, and no sign of relapse has been observed.

The *symptoms* of periarthritis depend in a measure upon the joint about which the inflammation occurs. We have an acute invasion nearly always; there are sharp pain, increased heat of the skin, an infiltration, if the disease be of recent date, a fluctuating tumor undergoing suppuration at a later stage. Still, we must remember that there is, as a rule, no chronicity.

In analyzing the forty-seven cases, it was found that their average duration, from the initial pain to the complete restoration of the functions of the limb, was between five and six months. There were ten completed within one month's time, and thirty within four months. There was one which lasted three years, yet joint disease was easily excluded. The deformities produced are muscular, and can in nearly every instance be accounted for by the locality of the abscess. Thirty-five went on to suppuration, and in twelve resolution took place. Eighteen of the twenty hip cases suppurated. Of the knee, eight of the sixteen—or one half only—terminated in this manner; four of the six about the ankle, the three near the sacro-iliac joint, and the two over the spine ended in suppuration.

As regards the frequency with which phlegmonous inflammation occurs around the different joints, my analysis shows: of the forty-seven, twenty for the hip, sixteen for the knee, six for the ankle, three for the sacro-iliac, and two for the spine.

As to the ages of the patients, there were three under one year, twenty-six under four years, only two over seventeen years. The oldest was fifty-seven years of age.

In searching for an exciting cause, seven were traced to a fall, two to a strain, two to vaccination, one to rubeola, one to hereditary syphilis, and one to thrombosis; in thirty-three no cause was found. Twenty-three were apparently in good health when attacked with the disease, nineteen were in poor health, and four were in a moderate condition of health. There were twenty-eight males and nineteen females.

Diagnosis.—To differentiate this from articular osteitis or

synovial diseases, we have to remember that *bone disease, especially of a tuberculous nature, is essentially chronic;* that the pain and lameness always precede the infiltration of the soft parts. Just here we recognize the importance of a clear history, and we must rely on this if we hope to make a diagnosis. We can not rely on the deformity or on the locality of the abscess In primary synovial disease the effusion within the capsule produces deformities that are characteristic. In synovitis of the hip, for instance, with much effusion, we have rotation outward and semi-flexion; yet we so rarely see a case of primary synovitis of the hip with much effusion that this affection will seldom present for differentiation. In synovitis of the knee we have semi-flexion, with a little genu-valgum when the capsule is distended. In one case that I have reported (Case XLVII.), while the fullness about the patella presented the appearance of that from synovial disease, there was one feature by which alone we were enabled to exclude the latter; *the limb was straight, and flexion was resisted.* In making differential diagnoses in joint diseases one must familiarize himself with the anatomy of the parts, and with the functions of the muscles. With this knowledge at command, a careful examination is necessary, and an opportunity of repeating this if obscurity presents.

The *prognosis* is good, not only as regards life, but as regards restoration of the joint to its normal condition. In only one case that I have analyzed did death occur, and this was before Listerism had been fairly introduced into the city. With proper antiseptic precautions, if the abscess be large and burrow extensively, we need apprehend no danger. The duration has already been given when speaking of the symptoms.

The treatment is that which would be adopted in phlegmonous inflammation irrespective of locality. There is no occasion for apparatus to correct deformity: that, being muscular, and depending on the presence of the areolar infiltration, will right itself when this infiltration has disappeared.

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